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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,538	09/26/2001	Guy Riddle	6533/53640	4598

30505	7590	07/11/2005

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EXAMINER
WU, QING YUAN

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-27 are pending in the application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 8-9 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

        a.   The following terms lack antecedent basis:

            i.   The creating step **(c)**- claim 23, line 4.

        b.   The following claim language is indefinite:

            i.   As per claim 8, it is uncertain what "a second allocation" in line 24 means (i.e. allocating a second resource, a subsequent resource allocation?).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 10-11, 13-19, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chawla et al. (hereafter Chawla) (U.S. Patent 6,771,661), in view of

Applicant Admitted Prior Art (hereafter AAPA).

6.   Chawla was cited in the last office action.

7.   As to claim 10, Chawla teaches the invention substantially as claimed including

dynamically allocate access to a network resource among a plurality of users [abstract,

lines 3-5; col. 6, lines 35-36; col. 20, lines 25-26; Fig. 5], comprising:

        a partition management module operative to dynamically create partitions

[abstract, lines 1-5; col. 2, lines 52-67]; and,

        a partitioning mechanism operative to enforce the partitions to control access to a

network resource among a plurality of users [col. 2, lines 17-30].

8.   Chawla does not specifically teach create partition in response to new users, the

partitions each define at least on parameter for managing aggregate bandwidth across all

data flows corresponding to a given user. However, Chawla disclosed create partition

upon the occurrence of specific events [abstract, lines 3-4; col. 6, lines 62-63; col. 20,

lines 46-47]. In addition, AAPA teaches update a static partition configuration as new

users sign up [AAPA, pg. 5, lines 7-9], and partitioning bandwidth in which partitions

ensure a minimum and/or cap bandwidth to a particular class of traffic such as data flows

involving a specific user [AAPA, pg. 4, lines 13-20].

9.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have combined the teaching of Chawla with the teaching of

AAPA because the teaching of Chawla would improve the mechanism disclosed by

AAPA [AAPA, pg. 5, lines 7-9] by automating (i.e. dynamic resource allocation) the

manual mechanism perform by administrators.

10.   As to claim 11, this claim is rejected for the same reason as claim 10 above. In

addition Chawla as modified teaches recognizing a new user of a network resource,

creating a partition on demand for the new user, wherein the partition is operable to

allocate utilization of the network resource to the new user [col. 1, line 66 to col. 2. line

16; col. 6, lines 54-64; Fig. 5], and disposing of the partition when no longer needed [col.

3, lines 4-12; AAPA, pg. 5, lines 7-9].

11.   As to claim 13, Chawla as modified teaches the invention substantially as claimed

including wherein receiving a set of parameters defining a partition [col. 3, lines 30-34,

lines 54-58; Fig. 2].

12.   As to claim 14, Chawla as modified teaches the invention substantially as claimed

including wherein the partition is configurable based on a characteristic of the user's

utilization of the network resource [col. 3, lines 30-34, 54-58; col. 20, lines 21-26].

13.   As to claims 15-16, Chawla as modified teaches the invention substantially as claimed including wherein the partition is operable to provide a minimum allocation of the network resource to the new user, and limit utilization of the network resource [AAPA, pg. 4, lines 15-16].

14.   As to claim 17, Chawla as modified does not specifically teach wherein the partition is implemented by class-based weighted fair queuing (hereafter CBWFQ) functionality. However, Chawla disclosed weighted fair queuing (hereafter WFQ) algorithm to dequeue data from various queues [col. 5, lines 40-45], and different levels of service for different dataflow [col. 2, lines 24-30]. It would have been obvious to one of an ordinary skill in the art at the time the invention was made, to have extended the functionality of WFQ to provide support for user-defined traffic classes.

15.   As to claim 18, Chawla as modified does not specifically teach wherein the partition is implemented by committed access rate functionality (hereafter CAR). The functionality of rate limiting in bandwidth management is well known in the art, in addition, Chawla disclosed different levels of service for different dataflow [col. 2, lines 24-30].

16.   As to claim 19, this claim is rejected for the same reason as claim 11 above.

17.   As to claim 26, this claim is rejected for the same reason as claims 11, and 13 above. In addition, Chawla as modified teaches associating a traffic classification to the

data flow, wherein traffic classification determines the parameters of the partition, and

enforcing the partition on the data flow [col. 2, lines 24-30; AAPA, pg. 24, lines 12-18].

18.   Claims 1-9, 12, 20-22, 25, and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chawla and AAPA as applied to claims 10, 11, 19 and 26 above, in

view of Eisler et al (hereafter Eisler) (U.S. Patent 6,128,713).

19.   Eisler was cited in the last office action.

20.   As to claim 12, Chawla and AAPA do not specifically teach wherein the

disposing step comprises the steps of reclaiming the partition for a subsequent new user if

the partition is inactive. However, Chawla disclosed releasing reserved resource that are

no longer required and allowing these resource to be used for transfer of other data [col.

3, lines 9-12]. In addition, Eisler teaches freeing up memory based on least recently used

algorithm [Eisler, col. 4, lines 61-64; col. 14, lines 24-29]. It would have been obvious to

one of an ordinary skill in the art at the time the invention was made, to have combined

the teaching of Chawla, AAPA and Eisler because the teaching of Eisler would allow

efficiently reused of resources by reallocating least active used resource for subsequent

uses.

21.   As to claim 20, this claim is rejected for the same reason as claims 11 and 12

above.

22.   As to claim 21, this claim is rejected for the same reason as claim 20 above. In

addition, Chawla, AAPA and Eisler teach reclaiming partition when necessary [Eisler,

col. 14, lines 30-33].

23.   As to claim 22, this claim is rejected for the same reason as claims 21 above.

24.   As to claim 25, this claim is rejected for the same reason as claims 19 and 21

above. In addition, Chawla, AAPA and Eisler teach a partition object space [col. 8, lines

51-53; 400, Fig. 6], monitoring use of the partitions [col. 7, lines 42-44; col. 8, lines 57-

63].

25.   As to claim 27, this claim is rejected for the same reason as claim 12 above.

26.   As to claim 1, this claim is rejected for the same reason as claims 10-11, and 25

above. In addition, Chawla, AAPA and Eisler teach at least one user partition object

having at least one attribute defining an allocation of a network resource to a user [191,

Fig. 2; Fig. 5; col. 3, lines 54-61]

27.   As to claims 2-5, these are apparatus claims for performing the method claims 12

and 21. Therefore, they are rejected for the same reason as claims 12 and 21 above.

28.   As to claims 6-7, these claim are rejected for the same reason as claim 1 above.

29.   As to claims 8-9, these claims are rejected for the same reason as claims 1-2, and

6 above.

30.   Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chawla, AAPA and Eisler as applied to claims 13 and 20 above, further in view of Gold

et al (hereafter Gold) (U.S. PG Pub 20020194326).

31.   Gold was cited in the last office action.

32.   As to claim 23, this claim is rejected for the same reason as claim 13. In addition,

Chawla, AAPA and Eisler does not specifically teach receiving a partition cap parameter

defining a desired limit on the number of user partitions; and wherein the creating step (c)

is conditioned on the number of existing user partitions not exceeding the partition cap.

However, Gold teaches preventing too many users from consuming a resource by

limiting the number of user access [Gold, pg. 1, paragraph 8, lines 9-14; pg. 1, paragraph

9; pg. 3, paragraph 50, lines 4-14]. It would have been obvious to one of an ordinary skill

in the art at the time the invention was made, to have combined the teaching of Chawla,

AAPA, and Eisler with the teaching of Gold because the teaching of Gold guarantee that

the number of users/requests will not exhaust the limited among of resources available.

33.   As to claim 24, this claim is rejected for the same reason as claim 13. In addition,

Chawla, AAPA, Eisler and Gold teach defining an overflow partition; and assigning new

users to the overflow partition, if the number of user partitions exceeds the partition cap

[col. 5, lines 11-15; col. 6, lines 54-58].

34.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,366,945 to Fong et al teaches dynamic partitioning of resources, U.S. Patent No. 6,011,776 to Berthaud et al teaches dynamic bandwidth estimation.

Response to Arguments

35.   Applicant's arguments filed 5/10/05 have been fully considered but are moot in view of the new ground(s) of rejection.

36.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
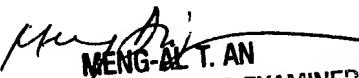
37.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571) 272-3776. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Qing-Yuan Wu

Examiner

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